

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently Amended) An exhaust purifying apparatus for an internal combustion engine, comprising:

an exhaust purifying mechanism that is located in an exhaust passage of the internal combustion engine, wherein the exhaust purifying mechanism traps particulate matter in exhaust gas;

a fuel adding device for adding fuel to exhaust gas that passes through the exhaust purifying mechanism;

a detecting section that detects a pressure difference between a section upstream and a section downstream of the exhaust purifying mechanism;

a comparing section, wherein, while the fuel adding device is adding fuel to exhaust gas, the comparing section compares the pressure difference that is detected by the detecting section at a predetermined point in time with the pressure difference reference value that has been set in correspondence with the predetermined point in time; and

a setting section, wherein, when the comparing section determines that the pressure difference exceeds the pressure difference reference value, the setting section determines that particulate matter is not sufficiently burned and is likely to remain and sets the manner of adding fuel of the fuel adding device to intermittent fuel addition so that the temperature of the exhaust purifying mechanism is increased,

wherein the predetermined point in time is a point in time at which an estimated accumulation amount of particulate matter in the exhaust purifying mechanism becomes equal to or less than a threshold value.

2. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein the predetermined point in time is a first point in time, and the pressure difference reference value is a first pressure difference reference value, and wherein, after the setting

section sets the manner of adding fuel to the intermittent fuel addition, the comparing section compares the pressure difference that is detected by the detecting section at a second point in time that is different from the first point in time with a second pressure difference reference value that has been set in correspondence with the second point in time.

3. (Previously Presented) The exhaust purifying apparatus according to claim 2, wherein, when the pressure difference detected at the second point in time becomes equal to or less than the second pressure difference reference value, the setting section ends the intermittent fuel addition.

4. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein, when an estimated accumulation amount of particulate matter in the exhaust purifying mechanism becomes zero after setting the manner of adding fuel to the intermittent fuel addition, the setting section ends the intermittent fuel addition.

5. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein, after setting the manner of adding fuel to the intermittent fuel addition, the setting section sets the fuel addition of the intermittent fuel addition to be performed a predetermined number of times.

6. (Canceled)

7. (Previously Presented) The exhaust purifying apparatus according to claim 1, further comprising an estimating section and a correction section, wherein the estimating section estimates the amount of noncombustible matter in the exhaust purifying mechanism based on the pressure difference detected when the intermittent fuel addition is ended, and wherein the correction section corrects the pressure difference detected by the detecting section based on the amount of noncombustible matter estimated by the estimating section.

8. (Previously Presented) The exhaust purifying apparatus according to claim 1, further comprising an estimating section and a correction section, wherein the estimating section estimates the amount of noncombustible matter in the exhaust purifying mechanism based on the pressure difference detected when the intermittent fuel addition is ended, and wherein the correction section corrects the pressure difference reference value based on the amount of noncombustible matter estimated by the estimating section.

9. (Previously Presented) The exhaust purifying apparatus according to claim 7, wherein the estimating section estimates the amount of noncombustible matter based on the pressure difference detected when the preceding intermittent fuel addition was ended and the pressure difference when the current intermittent fuel addition is ended.

10. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein, when an intake air amount of the internal combustion engine is equal to or more than a predetermined amount, the comparing section compares the pressure difference with the pressure difference reference value.

11. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein, when an intake air amount of the internal combustion engine is equal to or more than a predetermined amount, the detecting section detects the pressure difference between a section upstream and a section downstream of the exhaust purifying mechanism.

12. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein the pressure difference reference value is increased as the intake air amount of the internal combustion engine is decreased.

13. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein the pressure difference includes an average value of pressure differences detected during a period from the point in time until a predetermined time elapses.

14. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein the pressure difference includes a value obtained by smoothing pressure differences detected during a period from the point in time until a predetermined time elapses.

15. (Previously Presented) The exhaust purifying apparatus according to claim 1, wherein the exhaust purifying mechanism includes an exhaust purification catalyst through which particulate matter in exhaust gas passes and an exhaust purifying member that is located downstream of the exhaust purification catalyst and traps the particulate matter, and wherein the detecting section detects a pressure difference between a section upstream and a section downstream of the exhaust purifying member.

16. (Currently Amended) A method for purifying exhaust gas of an internal combustion engine, comprising:

trapping particulate matter in exhaust gas by an exhaust purifying mechanism located in an exhaust passage of the internal combustion engine;

adding fuel to exhaust gas that passes through the exhaust purifying mechanism;

detecting a pressure difference between a section upstream and a section downstream of the exhaust purifying mechanism;

comparing the pressure difference that is detected at a predetermined point in time with a pressure difference reference value that has been set in correspondence with the predetermined point in time, while the fuel addition is being executed; and

setting the manner of adding fuel to intermittent fuel addition such that the temperature of the exhaust purifying mechanism is increased when it is determined that the pressure difference exceeds the pressure difference reference value and a setting section determines the particulate matter is not sufficiently burned and is likely to remain,

wherein the predetermined point in time is a point in time at which an estimated accumulation amount of particulate matter in the exhaust purifying mechanism becomes equal to or less than a threshold value.

17. (Previously Presented) The exhaust purifying apparatus according to claim 8, wherein the estimating section estimates the amount of noncombustible matter based on the pressure difference detected when the preceding intermittent fuel addition was ended and the pressure difference when the current intermittent fuel addition is ended.